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WAR FOOD ADMINISTRATION
Office of Distribution
Washington 25, D. C.

December 18, 1944

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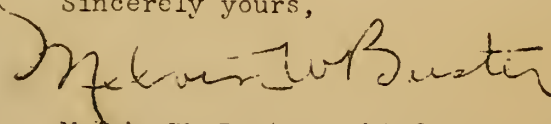
Gentlemen:

Attached are three reports of conferences to analyze factors affecting the marketing of egg and poultry products with special consideration of grade standards and terminology and administration of grading programs. These conferences were held to stimulate thought on these problems, to review accomplishments and to get suggestions for developing better egg and poultry marketing programs. These reports include:

1. A second report prepared by H. E. Botsford following a series of conferences with educational, regulatory, and industry representatives in each of the 48 States. This report is based on opinions expressed at the State conferences and conclusions drawn by Professor Botsford to assist in developing comprehensive State egg grading work on a uniform basis.
2. A brief report of a series of regional conferences with educational, regulatory, and industry representatives which were conducted by Henry G. F. Hamann, Chief of the Inspection and Grading Division, Dairy and Poultry Branch, and Melvin W. Buster.
3. A report of a conference of State officials in Minnesota which was submitted by W. H. Dankers, Extension Economist in Marketing, University of Minnesota. Topics considered in this conference were based on conclusions developed in the regional conference at Omaha, Nebr., September 18 and 19. This report presents an excellent illustration of effective action to secure cooperative effort in developing more satisfactory marketing of poultry products. We have obtained Mr. Dankers' permission to forward a copy of this report to you, with the belief that it will furnish helpful suggestions.

It is our hope that each person receiving this letter, with the attached reports, will consider it as a personal request for his opinions regarding the observations and suggestions presented in the reports, particularly with respect to means of obtaining better coordinated effort in improving the marketing of egg and poultry products.

Sincerely yours,



Melvin W. Buster, Chief
Market Standards & Facilities Section
Poultry Products Division
Dairy and Poultry Branch

Attachments

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WAR FOOD ADMINISTRATION
Office of Distribution
Washington 25, D. C.

December 1944

NATIONAL UNIFORM STANDARDS FOR QUALITY OF INDIVIDUAL EGGS,
EGG GRADES, WEIGHT CLASSES, AND REGULATIONS

By H. E. Botsford, Marketing Specialist

Uniform standards for quality of individual eggs and uniform grades for eggs are desirable because eggs are an established food commodity, produced and consumed in every State and distributed in intrastate and interstate channels of trade. When a nationally used commodity can be described and discussed in uniform terms, confidence in trading results, educational programs on grades benefit the entire industry, and brand names can be more easily established and their reputation strengthened. Egg candlers, inspectors, and others engaged in preparing or inspecting eggs can be more satisfactorily trained. Furthermore, the various qualities of eggs when packed under uniform grades and standards more readily find the most suitable market outlets. This can materially reduce distribution costs and give greater consumer understanding and satisfaction.

A study of State egg grades and egg marketing laws and regulations and their administration throughout the United States has developed four pertinent conclusions related to marketing problems and grading procedures:

1. It is generally believed that uniform egg grades and the improvement of the poultry industry throughout the United States are closely associated.
2. Present differences in standards for quality of individual eggs, egg grades, weights, terminology, and regulations governing their use can be compromised without great difficulty and this should contribute to increased effectiveness and efficiency of grading programs within individual States and the entire country.
3. Sufficient funds and personnel are generally not available for the proper enforcement of regulations regarding retail egg grades and this is recognized in many States as detrimental to the best interests of producers, distributors, and consumers.
4. Certain States have not yet established retail egg grades.

Uniform Egg Grades

At the present time, more people are thinking of the values and the problems involved in grading eggs than ever before. Therefore, this appears to be an opportune time to give special consideration to establishing retail egg grades and uniformity of grades in all the States.

Regulatory and educational officials in each State and the War Food Administration can render a much-needed service by sponsoring programs to secure greater uniformity of egg standards, grades, and terminology, and the development of practical enforcement regulations.

After retail egg grades are established, some time must elapse before benefits from the grading program are realized. Therefore, effective efforts now to develop a uniform grading program should aid materially in maintaining a high level of egg consumption in the post-war period, and at the same time prove beneficial to producers, handlers, and consumers of poultry products.

SUGGESTED PLAN OF ACTION

Based on a study of egg grades and regulations in each of the 48 States, it is obvious that changes in standards for quality of individual eggs, grade specifications, laws and regulations in many of the States would lead in the direction of uniformity and strengthen the poultry industry's competitive position. Consequently, it is suggested that a representative committee should be appointed in each State to study the situation, develop recommendations, and serve in an advisory capacity to the official State agency responsible for administering official grading work, or to serve as the official State agency. Such an agency should include representatives of the State Department of Agriculture and the Agricultural Extension Service because of the dual regulatory and educational responsibilities.

Several States now have committees, of five to seven members, established for this purpose. The duties of such committees include: (1) Determining the standards for quality of individual eggs and establishing grades based on these standards; (2) drafting and recommending the adoption of rules and regulations for effectively controlling their use; and (3) advising with the Commissioner of Agriculture or other legal authority on these or other marketing problems. In certain States this committee may be selected by a State organization such as a State poultry council which is composed of representatives of production, marketing, educational, regulatory, and other agencies interested in the poultry industry.

Important Considerations

The following suggestions may prove helpful in formulating a committee plan of action:

1. Compare the present State standards for quality of individual eggs with the latest U. S. Standards for Quality of individual Eggs effective January 2, 1943 and consider the adoption of Federal standards or the changing of present State standards when necessary in the interest of national uniformity. The specifications for the Official 1943 U. S. Standards for Quality of Individual Eggs were developed from recommendations received from industry representatives throughout the entire country. A copy of these standards is attached to this report for reference purposes.

2. Consider adoption of consumer or retail egg grades and weight classes that are in conformity with the Tentative U. S. Consumer Grades and Weight Classes for Shell Eggs. A copy is attached.

3. Study the State laws and regulations with the intent of attaining greater simplicity and effectiveness. Suggestions based on a study of existing legislation in the 48 States were included in the report entitled "Egg Grades and Regulations

in the United States," issued October 11, 1944.

4. Determine the size of the inspection staff necessary to properly enforce official grading work within the State.

5. Make plans to obtain the funds needed to conduct effectively essential egg grading and inspection work within the State.

The discussion which follows presents information intended to be helpful in considering these committee activities.

Standards for quality of Individual Eggs

The standards for individual shell eggs used as a basis for establishing most of the present State grades were developed by the Federal Department of Agriculture. The standards issued in 1925 were on a tentative basis and were revised in January 1943. Eight States have adopted these present standards outright while others have combined those in effect at different times since 1925 or have introduced descriptions and specifications of their own. The actual main differences appear to be of minor importance and only slight changes are necessary in most instances to attain uniformity.

Following is a list of the States utilizing the former tentative U. S. standards and the standards promulgated in January 1943.

Use by States of U. S. Standards for Quality of Individual Eggs in Formulating Grades

Seventeen States use the tentative 1925 U. S. standards in all or part of their grade descriptions.

California	North Dakota
Colorado	Rhode Island
Illinois	Utah
Iowa	Vermont
Maine	Washington
Maryland	West Virginia
Massachusetts	Wisconsin
New Jersey	
Nevada	
New York	

Nine States use the tentative 1933 U. S. standards in all or part of the grade descriptions. Three of these States combine the 1925 and 1933 U.S. standards.

Georgia	New Hampshire
Illinois	Oregon
Maine	Pennsylvania
Maryland	Utah
Minnesota	

Eight States use the U. S. standards effective January 2, 1943, entirely in their grades.

Connecticut	Mississippi
Florida	Montana
Indiana	North Carolina
Michigan	Ohio

Five States have used terms of their own in describing their grades, or have not specified the standards in use at the time of this report.

Alabama	Louisiana
Arizona	Wyoming
Delaware	

Comparison of Tentative and Present U. S. Standards
for Quality of Individual Shell Eggs

The principal changes in the tentative U. S. standards of quality issued in 1925, revised in 1933, and revised and promulgated in January 1943 involve adjustments in specifications relating to shell cleanliness, depth and condition of the air cell, and the description of the candling appearance of the yolk.

Investigations have shown no relationship between albumen height and slightly wavy air cells having movement at the edge of the cell not in excess of 1/8 inch or between albumen height and air cell of 1/4 inch or less in depth. Consequently, in the 1943 revisions of standards the amount of air cell movement and depth referred to above were changed to avoid discrimination in Grade AA and Grade A specifications for individual shell eggs.

In the tentative U. S. standards issued prior to 1943, emphasis was placed on the degree of yolk shadow that could be discerned in candling. In the U. S. standards adopted in 1943, emphasis was shifted from the visibility of yolk shadow as a means of determining albumen condition to consideration of the distinctness of yolk outline.

A change in the standards of any State to conform to the more recent interpretation of candling appearance as an indicator of interior quality may require some educational effort, but will not result in a lowering of quality in eggs of Grade AA and Grade A.

Progress of inestimable value would accrue to the poultry industry if every State were to adopt the same standards of quality and then cooperate on a national basis to modify them if necessary in the light of experience and majority opinion.

Establishing Grades

A step which logically follows adoption of uniform standards of quality for individual shell eggs is the establishment of grades based on the uniform standards.

Retail grades, in the opinion of the majority of officials interviewed in making this survey, appear to offer the greatest opportunity to increase consumer demand for eggs and, in turn, lead to more widespread use of wholesale grades and buying on a graded basis at the producer level, where quality improvement must begin.

To bring this about, the "responsibility for final development and certification of uniform grades must necessarily be assigned to some central coordinating agency. By act of Congress, the Department of Agriculture is authorized and has been performing this service for several years."

The Number of Retail Egg Grades to Establish

At present, the number of egg grades in the States varies from one to four. In most States, having established retail grades, a total of four grades, ranging from and including Grades AA, A, B, and C are provided. Four retail grades make it possible for producers and retailers to supply consumers with eggs of qualities to meet their demands, based on price and utilization considerations.

Only a few States have established Grade AA, or its equivalent. The Grade AA means a superior quality and is practical in States where the necessary conditions for maintaining quality in eggs can be provided. A State has nothing to lose by establishing this grade and permitting its use under State inspection. An existing demand justifies the grade in States where practical.

In some sections of the United States, the belief is expressed that only three grades, beginning with Grade A, are needed. There is also the view that only two grades, Grade A and Grade B, are desired and that Grade C eggs should not be offered for sale at retail levels.

It would seem logical in formulating State grades to provide for all types of demand. However, the important point is that of establishing Nation-wide, uniform minimum grade specifications, in each State, for each grade to be used. States that deem Grade AA to be impracticable could establish minimum specifications for Grade A that would be in agreement with Nation-wide standards for this grade.

It is probably questionable whether to exclude Grade C eggs from retail or consumer grade standards or to lower minimum requirements for Grade B to include Grade C eggs, as classified in U. S. Standards of Quality for Individual Shell Eggs.

It may be economically unsound to place all emphasis on the production and marketing of Grade AA and Grade A eggs. Greater total consumption may logically be expected to follow consumer education and understanding of the equal food value and lower cost of Grade B and Grade C eggs for cooking purposes. In addition, many consumers, because of nationality, habit, and price, prefer to purchase Grade B and Grade C eggs. It is obvious, of course, that emphasis on the production and marketing of Grade AA and Grade A eggs stems from the fact that production is only seasonally adequate for demand and because considerable quantities of Grade B and Grade C accumulate as natural deterioration in quality occurs following production and during the marketing process.

Proportion of Grades in Retail Stores

Estimates of personnel in the Office of Distribution and the Bureau of Agricultural Economics indicate a range in the percentage of eggs of different grades marketed in retail stores. The following tabulation is based on estimates of actual quality irrespective of identification.

Grade AA (%)	Grade A (%)	Grade B (%)	Grade C (%)
5 to 10 7	30 to 40 35	40 to 50 42	15 to 20 16

The second line of figures represents the best estimates narrowed to a single percentage figure. The figures are purely estimates since no recent reliable data are available.

Grading and Labeling Important to Consumers

Unanimity of opinion exists concerning the consumer's right to be informed as to the quality of the product purchased. Retail sales of eggs on a graded basis may be made a mandatory requirement, or the use of State retail grades may be voluntary, depending upon majority opinion in any State. However, it seems clear that all eggs sold at retail should be required to be identified as being of one of the applicable State grades or marked and sold as "ungraded" eggs and that sale of inedible eggs should be prohibited. Any voluntary use of State grades should be fortified with a requirement that the eggs so classified must meet at least the minimum standards for that grade.

The term "ungraded" is suggested for eggs which do not meet definite grade specifications because it clearly sets forth the actual condition in language understood by all consumers who may then make purchases according to desire, use, and price considerations.

Tolerances in Grades

Eggs should be packed 100 percent according to the grade. Practical inspection considerations require that allowances be made for average efficiency of graders in failing to detect minor defects by establishing maximum tolerances for such defects.

Weight Considerations in Grade Determinations

In the majority of States having established retail grades, the range of weight within a size classification, such as Extra Large, Large, Medium, and Small, has been set rather uniformly at not more than $2/8$ ounce of variation between individual eggs in any dozen. This amounts to a range in weight of 3 ounces per dozen when the size of the individual egg is expressed in terms of weight per dozen, or 12 eggs, of that size.

In practically all States the average weight per dozen for large-sized eggs has been established at 24 ounces per dozen. The minimum weight per egg in a dozen of this large-sized classification is usually set at the rate of 23 ounces per dozen but in a few States the figure of 22 ounces has been established. When a 22-ounce minimum is permitted a less uniform pack results and wider variation in minimum and maximum weights is necessary to result in an average dozen weight of 24 ounces. This is illustrated in the following table which shows examples of weight combinations that are necessary to yield a weight of 24 ounces per dozen.

Number of eggs required to average 24 oz. per dozen when the minimum weight of eggs permitted in the dozen is at the rate of 23 oz. and 22 oz. per dozen

Minimum weight 23 ounces			:	Minimum weight 22 ounces		
Number of eggs	Average weight at the dozen rate (ounces)	Average weight of the dozen (ounces)	:	Number of eggs	Average weight at the dozen rate (ounces)	Average weight of the dozen (oz.)
			:			
1	25		:	11	25	
10	24	24	:	1	22	24.75
1	23		:			
2	25		:	10	25	
8	24	24	:	1	24	24.67
2	23		:	1	22	
6	25		:	7	25	
6	23	24	:	1	24	
3	25		:	2	23	24
6	24	24	:	2	22	
3	23		:	1	26	
			:	10	24	24
			:	1	22	
			:	3	26	
			:	6	24	24
			:	3	22	

Twenty-two-ounce eggs appear to belong in the Medium class and must be placed there to offset the 20-ounce minimum allowed in Mediums which average 21 ounces per dozen.

Most Common Weight Class Specifications

The principal weight classes according to use by the largest number of States:

<u>Weight Class</u>	<u>Minimum Weight</u>		<u>No. of States</u>
	<u>Per Dozen</u> (ounces)	<u>Per Egg</u> (ounces)	
Large	24	23	18
Medium	21	20	17
Pullet	19	18	3
Peewees	Below 18		3

In 27 States the sizes below Medium are grouped as "small."

Small	18	15	9
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In certain areas of the country commercial practice includes the use of additional weight classes, such as Extra Large. The use of the prevailing 2/8 ounce variation per egg within a weight class and 3 ounces per dozen between weight classes will result in a practical line of demarcation and the standards adopted for the principal weight classes should fit into the pattern of national uniformity

Weight Tolerance

In any of these weight standards for consumer or retail grades there appears to be no valid reason for permitting a weight tolerance in addition to that permitted by the 2/8-ounce variation for individual eggs.

Egg Laws and Regulations 1/

In general, the most effective types of egg laws are those that are basically intended to be an enabling type of legislation that provides:

- (a) For the appointment or selection of an official State agency to administer the egg law
- (b) The authority for establishing quality specifications and grades and for their adjustment.
- (c) The authority to promulgate regulations pertaining to enforcement of inspection and grading procedure.
- (d) An established means of financing grading and inspection activities by means of appropriation or fees or a combination of these methods.

1/ The Dominion of Canada has operated on a program of mandatory national uniform grades for many years. A review of the Canadian regulations for grading, packing, and marking eggs is attached to this report for reference purposes.

- (e) Penalty provisions for violations of the law or regulations pertaining to it. Penalty provisions should be sufficiently stringent to seriously discourage potential violations.
- (f) For the appointment or selection of a representative industry advisory committee for purposes of consultation in developing quality specifications, grade standards, rules, and regulations in case the official State agency does not include representatives from the principal elements of the poultry industry.
(Additional suggestions in first report issued October 11, 1944.)

The Inspection Staff

Egg grades are of little value without efficient enforcement of the regulations.

It should be expected that the inspection staff will need to be trained, not only to properly inspect eggs at retail but also to educate wholesalers and retailers concerning the grades and the law and to be prepared to assist in any other manner that will lead to compliance with the regulations. Education is of greater fundamental importance than are penalties, but both are needed.

The size of the inspection staff will depend on the population, the stores to be inspected, and the area to be covered.

A basis for number of inspections that may help in determining the number of inspectors necessary is that of one annual inspection per 500 inhabitants of a city, county, or community. The number of inspectors is based in certain States on the number of retail stores and provision for several inspections annually. (A further reference will be found in the previous report.)

Financing

The source and amount of funds needed to protect the act deserve careful consideration. (Discussed in the previous report.)

Educational Program Important

Comprehensive educational programs are essential to the success of marketing programs and especially when participation in such programs is on a voluntary basis. Education is necessary to establish proper retail egg grades and regulations and producers and distributors must be trained so that they will know how to provide properly graded and labeled eggs to consumer markets. Consumers must be provided with information necessary for thorough understanding of graded quality and identification of graded products to facilitate intelligent and satisfactory purchasing. Likewise, consumers should be provided with information that is fundamental to their understanding of the various uses to which the different grades are best adapted.

Education must be considered in formulating any State or national program on egg grading.

Significantly, the poultry industry in any State should benefit from educational efforts conducted in other States, using similar retail egg grades. Maximum benefits to all will accrue when uniform retail egg grades are adopted on a national basis.

A REVIEW OF THE CANADIAN REGULATIONS FOR GRADING,
PACKING AND MARKING EGGS

1. All eggs in Canada must be bought and sold on a graded basis. Inspection of eggs occurs in every channel of trade. There are but two possible destinations for "ungraded eggs," either a First Receiver, enroute to a registered egg grading station, or the egg grading station itself. Such eggs must be marked accordingly. Eggs from each producer must be suitably identified, so that final returns can be made according to grade. Advance payments of 80 percent or less of the Grade B value for the number of eggs delivered may be paid to a producer for ungraded eggs by a First Receiver or a registered egg grading station. After the eggs are graded the balance due is returned to the producer. All forms and statements must be retained for 90 days.
2. Certificates of Registration for registered egg grading stations are granted annually and only when compliance with definite regulations is assured. A certificate is required in order to grade, pack, or mark in accordance with Canadian Egg Standards. The producer is not required to get a certificate.
3. Eggs out of storage enroute to a grading station must be marked "Ungraded, out of storage" and may be graded or sold only in Grades B or C or voluntary Grade A Medium or Grade A Pullets.
4. Grading. All eggs must be graded into compulsory Grades A Large, B, or C, or into the optional grades of A Medium, A Pullets, B Large, Medium, or Pullets or A 1 Large, Medium, or Pullet. (Grade A 1 can be graded, packed, and marked only by producers under certain approved conditions.) The quality and weight for each grade are definitely indicated in the Canadian Regulations. All eggs must be neither above nor below the grade indicated; otherwise they are considered "out of grade."
 - a. Below minimum grade. Inedibles and eggs incubated more than 8 days may be shipped or transported only by persons having a permit to do so, and for livestock feeding only.
 - b. Tolerance is 16 eggs per 30 dozen at the grading station and 24 eggs per 30 dozen at destination.
 - c. Size

	Minimum weight of individual egg
Grade A Large	2 oz. - 24 oz. per doz.
Grade A Medium	1-10/12 oz. - 22 oz. per doz.
Grade A Pullets	1-6/12 oz. - 18 oz. per doz.

Grade B Large	2 oz.	- 24 oz. per doz.
Grade B Medium	1-10/12 oz.	- 22 oz. per doz.
Grade B Pullets	1-8/12 oz.	- 20 oz. per doz.

Tolerance in weight

(Sept. 15 to Feb. 29)

Minimum 23¹/₂ oz. per doz. - case average 45 lbs. for Large

Minimum 21¹/₂ oz. per doz. - case average 42 lbs. for Medium

Grade A1 Large	24 oz.
Grade A1 Medium	22 oz.
Grade A1 Pullets	20 oz.

Grade C - no minimum weights

d. Grades

Quality Factors

	A 1	A	B	C
Shell	: sound and regular	: sound and regular	: sound	: cracked or irregular
Appearance	: Clean	: Clean	: Slight stains	: Dirty or stained
	:	:	: small spots	:
Air cell	: 1/8" or less	: 3/16" or less	: 3/8" or less	: No maximum size.
	: in depth	: in depth	: in depth	:
Yolk	: Shadow indistinct	: Outline indistinct	: Outline slightly	: Outline distinctly
	: small round	: shadow reasonably	: visible. Shad-	: visible.
	: central location	: small and round	: ow slightly	:
	:	: and central posi-	: oblong, not en-	:
	:	: tion	: larged or flat-	:
	:	:	: tened. Float	:
	:	:	: freely. Not	:
	:	:	: rising to upper	:
	:	:	: end of egg on	:
	:	:	: twirling	:
Disq. for	: Mottled or grass	: Mottled yolks,	: Extremely mot-	: Stuck yolks, seeping
the	: yolks. Visible	: grass yolks,	: tled or grass	: yolk. Extremely mot-
grade	: germ spot. Float-	: Visible germ spot	: yolks. Defi-	: tled or grass yolks.
	: ing cell. Meat	: Floating air cell	: nitely pro-	: Definitely pro-
	: spot.	: Meat spot.	: nounced germ	: nounced germ spots.
	:	:	: spots. Float-	: Floating air cell.
	:	:	: ing air cell.	: Meat spots.
	:	:	: Meat spots.	:

5. Marking - All cases, cartons, boxes, open containers, or wrapped packages must be properly marked with the grade and the weight as specified. When sent to retailers the number of the Registered Egg Grading Station responsible or the name of the producer, if the retailer is a First Receiver, must be stamped on the container. If imported the package must show the name of the country.

Eggs are deemed misbranded if, within 36 hours after being delivered, they are found below the grade stated.

6. Detention - Any eggs held in violation may be detained from sale until regraded by the original station or by a nearby Registered Egg Grading Station after which, if the eggs meet requirements, they may be released.

General Information:

- a. Freshness - Words denoting freshness can be used only with Grades A1 or A. The words "new laid" are limited to Grade A1.
- b. Appropriations are made for the inspection service.
- c. Penalties are provided, but all pecuniary penalties are paid into the consolidated revenue fund of Canada.
- d. Advertising must prominently and honestly state the grade.
- e. Country stores are not a severe problem. Those operating are registered and must meet specific regulations.

Report on Regional Conferences on Egg and Poultry Grading
Procedures and Contemplated Programs

Conferences were held at Atlanta, July 14 and 15; Chicago, September 13 and 14; Omaha, September 18 and 19; Sacramento, September 22 and 23; and Dallas, October 3 and 4. (Similar conferences in the Northeast Region have been scheduled in Boston, December 11 and 12, and in Philadelphia, December 14 and 15.)

Attendance included representatives of the WFA Inspection and Grading Service, State Departments of Agriculture, College poultry departments, Agricultural Extension Service poultry and egg marketing specialists, and independent and cooperative marketing agencies from all the Midwest, Southwest, and Western States, except the States of Wyoming and Washington. Representatives of the Army QMC were also present at the Sacramento and Dallas conferences. On the whole, the attendance was very satisfactory, many States having three to seven or more representatives in attendance.

Conferences were conducted by Henry G. F. Hamann and Melvin W. Buster and Regional WFA representatives; on an informal basis, to encourage free and complete discussion on current and post-war egg and poultry marketing problems, especially those pertaining to grade standards and official grading.

Subjects Discussed

1. Egg and poultry marketing situation and factors affecting grading and quality of products
2. Regulations and method of operation of the Inspection and Grading Division by means of cooperative Federal and Federal-State agreements.
3. Activities of the Market Standards and Facilities Section, particularly with respect to development and issuance of grade standards for egg and poultry products, development of educational and demonstrational material and plans for development of greater coordination of effort in official grading work through State agencies signatory to cooperative agreements.
4. Cooperative relationships between Federal and State marketing and educational agencies.
5. The existing situation with respect to marketing of egg and poultry products in each State and suggestions for improvements.

General Conclusions of Conferences

(Varied somewhat in each Region, but all quite similar in substance and by majority agreement)

1. Favored national uniform, simple grade standards for egg and poultry products developed through broad recommendations from the industry and interested agencies functioning through State agencies and a national committee.

2. Favored purchase of eggs and poultry from producers on a graded basis to permit equitable payment in accordance with quality values and provide an incentive to produce and maintain the highest quality in these products.
3. It is practical and advantageous to handlers to purchase and sell eggs and poultry on a graded basis.
 - (a) It was the general consensus that marketing methods and facilities are in need of rather drastic improvement. The establishment of a better and more uniform quality basis for the handling of poultry products is desirable at an early date.
4. Interested educational agencies, regulatory agencies, trade associations and handlers should cooperate in the development and conduct of a greater consumer educational program based on uniform grade standards, terminology, and labels. It was requested that the Dairy and Poultry Branch assist by the preparation of educational material, such as charts, circulars, film strips, and films.
5. There was considerable discussion on the need for a better coordinated, organized uniform poultry and egg marketing program. The Dairy and Poultry Branch was requested to proceed with the development of a national marketing program based on uniform grade standards and terminology to be referred to all interested groups for consideration and recommendation in respect to appropriate action. 1/

Conferences with Inspection and Grading Supervisors
Atlanta, Chicago, Omaha, San Francisco, Los Angeles, and Dallas

Following each of the Regional conferences, meetings were held with the supervisory staff of the Inspection and Grading Division. These meetings were held for the purpose of affording supervisors an opportunity to discuss their various problems as well as to grade the various commodities under their supervision in order to correlate the interpretations of grade standards. Discussions also covered grade standards, the 1945 dried egg program, and a review of the new requirements as set up in cooperation with the Industry Technical Committee at Chicago. Various administrative problems in connection with the Inspection and Grading program were also discussed.

1/ Representatives at one conference passed a resolution requesting the Dairy and Poultry Branch to call a national conference of representatives of the industry by January 1, 1945, for the purpose of developing a national marketing program. Favorable consideration is being given this suggestion although it will not be possible to call such a conference as early as January.

EGG AND POULTRY STANDARDS AND GRADES IN THE POST-WAR PERIOD

Conference - October 16, 1944
University Farm, St. Paul

Represented were the State Department of Agriculture, Grading and Inspection Service, and the Divisions of Home Economics, Agricultural Economics, Poultry Husbandry, and Agricultural Extension of the University of Minnesota.
In attendance were:

Bernhard Swanson, Deputy Commissioner of Agriculture
W. Wheeler, Chief Egg Inspector
Wyllie B. McNeal, Chief, Home Economics
Isabel Nobel, Foods Section, Home Economics
Louise Leavitt, Foods Section, Home Economics
H. J. Sloan, Chief, Poultry Section
Thomas Canfield, Poultry Section
W. C. Waite, Agricultural Economics
W. H. Dankers, Agricultural Extension
Cora Cooke, Agricultural Extension

Mr. Dankers opened the meeting with a brief report of a recent meeting held in Omaha, Nebr., called by War Food Administration to discuss the development of post-war plans for a standards and grades program for eggs and poultry. The report was summed up in the statement, that the problem is one of satisfying producers, processors, and handlers of poultry products, and consumers, rather than any one or two groups.

Reports were then given by each person in regard to activities in his or her own field, as an indication of what has been done and is still to be done, and as a means of thinking through and coordinating further efforts in egg and poultry production and marketing.

A. Regional Committee on Marketing - Sloan and Waite Committee's purpose is to:

1. Make more generally available such information as we already have in various States, and to get it into usable form.
2. Stimulate new research. One problem is that of securing new outlets for increased production, especially in the post-war period.

B. Projects considered by the Regional Committee

1. Market Price Information - Survey of sources now available and those that might be used.
2. Quality programs now in effect. Survey to be made.

3. Consumer Studies - Quality and price relationships, variations in consumption between high and low income groups, etc.

C. Consumer Survey in Twin Cities - Sloan

1. This study brought out, among other things, the lack of dependability of grading as now practiced, so far as the product sold at retail is concerned.

D. Consumers teaching and research - McNeal, Noble, Leavitt

1. Discussion indicated a lack of suitable teaching material and background research to permit an effective teaching program.
2. Teaching program is also handicapped by inadequacy of grading as it exists.
3. To date, consumer research in eggs and poultry has not been linked to grades as such.

E. Extension Activities - Cooke

1. No consistent program has been carried out to date
 - a. Occasional short-time programs have been put on with selected groups
 - b. Egg Institutes have been held with a special appeal to both producers and consumer. The program included discussion of standards and grades, an egg quality contest (egg show), and at times an egg cake show. Egg quality demonstrations were given.
 - c. A definite program is handicapped because of a lack of sufficient grade outlets and payment on grade at the producer level, to encourage action toward high quality production and handling.

F. Regulatory programs - Wheeler

1. Confusion in standards and grades which has always existed is aggravated today because of the different grades and terminology used by different Government agencies.
2. Minnesota regulations permit sale of eggs as "Unclassified" which has led to practice of selling undergrades in this classification, rather than "nest run" or "current receipts."

G. How State regulation can contribute - Swenson

1. We need Federal grades that are practical and uniform for all parts of the country. Grading programs are most effective under a Federal-State cooperative agreement.

2. A law making it compulsory for local dealers to buy eggs and poultry from farmers on grade should work. It has worked in the dairy industry. It would eliminate the possibility of a producer going back to a current receipts market when dissatisfied and would make grocery store buying more difficult.

H. Discussion

1. Have we gained or lost ground during the war? I believe we have gained. It seems that at least half of the produce buyers who have been selling to Government agencies will continue to buy on grade when the war is over. - Wheeler
2. Most concerns are buying on two grades and selling on three. This was considered as undesirable by the group, because it does not remunerate the producers in line with the quality of eggs sold.
3. It was the consensus of the group that the same egg standards and grades should be used from producer to retail sale, with increased tolerances as the eggs move further along the marketing channel. One regrading should be sufficient.
4. Grades should be made as few in number and as simple as possible to make them understandable and acceptable to producers and small dealers and still provide sufficient opportunity for choice on the part of consumers. Three quality grades were considered ample with the possibility of labeling Grade C as regular, checks, or dirties, whatever condition, but not establishing a separate grade. A fixed price differential for weight differences was discussed.
5. What recourse does a restaurant have in case eggs purchased are not up to grade? Can call for inspection, but not enough inspectors are employed to handle this satisfactorily. State Legislature has not made sufficient appropriation. Some of the former inspectors are now assisting with the Federal-State grading program. This is helpful for surplus eggs that are shipped out to distant consuming centers but does not give protection to local retail buyers and consumers.
6. A more effective egg grading law is necessary to re-enforce the inspection service. It was suggested that another session might be desirable to study this in more detail.
7. More consumer research is needed to determine what the consumer wants and how grading practice can facilitate meeting those demands. Grading for quality is a mechanical process. This has caused complication because consumer acceptance is largely based on palatability.

(signed)

Cora Cooke, Secretary

UNITED STATES DEPARTMENT OF AGRICULTURE
Food Distribution Administration

TENTATIVE U. S. STANDARDS AND WEIGHT CLASSES
FOR CONSUMER GRADES FOR SHELL EGGS

Tentative U. S. Consumer Grades for Shell Eggs

U. S. CONSUMER GRADE AA - Shall consist of eggs of which at least 80% are U. S. Grade AA, 10% are U. S. Grade A or better and the balance are U. S. Grade B, except for a permitted tolerance of eighteen eggs per thirty dozen that may be of the quality of U. S. Grade C, U. S. Light Dirty or U. S. Check or better and of which not more than three eggs may contain small meat spots or blood clots.

U. S. CONSUMER GRADE A - Shall consist of eggs of which at least 80% are U. S. Grade A or better and the balance are U. S. Grade B, except for a permitted tolerance of eighteen eggs per thirty dozen that may be of the quality of U. S. Grade C, U. S. Light Dirty or U. S. Check or better and of which not more than three eggs may contain small meat spots or blood clots.

U. S. CONSUMER GRADE B - Shall consist of eggs of which at least 80% are U. S. Grade B or better and the balance are U. S. Grade C, or U. S. Light Dirty, except for a permitted tolerance of thirty-six eggs per thirty dozen of the quality of U. S. Dirty or U. S. Check or better of which not more than five eggs may contain small meat spots or blood clots.

U. S. CONSUMER GRADE C - Shall consist of eggs of which at least 80% are U. S. Grade C or U. S. Light Dirty or better and the balance are U. S. Check or U. S. Dirty.

Tentative U. S. Weight Classes for Consumer Grades for Shell Eggs

Size or Weight Class	Minimum Net Weight per Dozen(Ounces)	Minimum Net Weight per 30 Dozen(Pounds)	Minimum Weight for Individual Eggs at Rate per Dozen(Ounces)
JUMBO	28	52	27
EXTRA LARGE	26	48½	25
LARGE	24	45	23
MEDIUM	21	40	20
SMALL	18	34	15

These Tentative U. S. Standards and Weight Classes for Consumer Grades for Shell Eggs supersede, effective December 23, 1942, all U. S. Standards and Weight Classes for Retail or Consumer Grades of Shell Eggs previously issued.

Approved: December 23, 1942

CW Kitchen

Deputy Director
Food Distribution Administration

SUMMARY OF TENTATIVE U. S. CONSUMER GRADES FOR SHELL EGGS

U. S. Consumer Grade	U. S. Grade AA (minimum percentage).	U. S. Grade A or better (minimum percentage).	U. S. Grade B or better (minimum percentage).	U. S. Grade C or U. S. Light Dirty or better. (minimum percentage)	U. S. Check or U. S. Dirty	Maximum number of eggs allowed as tolerance per thirty dozen. U. S. Grade C, U. S. Light Dirty or U. S. Check or better or U. S. Dirty or better
U. S. Grade AA	80	10	Balance			18 (5%) including not more than 3 (.8%) eggs with small meat spots or small blood clots.
U. S. Grade A		80	Balance			18 (5%) including not more than 3 (.8%) eggs with small meat spots or small blood clots.
U. S. Grade B			80	Balance		36 (10%) including not more than 5 (1.4%) eggs with small meat spots or small blood clots.
U. S. Grade C				80	Balance	

UNITED STATES STANDARDS FOR QUALITY
FOR INDIVIDUAL SHELL EGGS

ORDER OF PROMULGATION OF STANDARDS

United States Department
of Agriculture,
Office of the Secretary,
Washington, D. C.

By virtue of the authority vested in the Secretary of Agriculture by the provision in the act of Congress entitled "An act making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1943 and for other purposes," approved July 22, 1942 (56 stat. 664) reading in part as follows: "for acquiring and diffusing among the people of the United States useful information relative to the standardization, classification, grading, preparation for market, handling, and marketing of farm and food products, including the demonstration and promotion of the use of uniform standards of classification of American farm and food products throughout the world," the following standards are promulgated as "Official United States Standards for Quality of Individual Shell Eggs," to be employed for the grading and certification of shell eggs by official graders of the United States Department of Agriculture, and to be in force and effect on January 2, 1943 and thereafter as long as Congress shall provide the necessary authority therefor, unless amended or superseded by standards hereafter prescribed and promulgated. These standards shall supersede all standards for quality of individual shell eggs previously promulgated under such authority.

SPECIFICATIONS FOR OFFICIAL UNITED STATES STANDARDS
FOR QUALITY OF INDIVIDUAL SHELL EGGS

- (1) U. S. Standards for quality of individual eggs with clean unbroken shells.

U. S. Standards for quality of individual eggs with clean unbroken shells shall be as follows:

U. S. GRADE AA - The shell must be clean, unbroken and normal. The air cell must not exceed $1/8$ inch in depth and may be regular or slightly wavy. The yolk outline may be slightly defined. The yolk must be free from defects or blemishes visible before the candle. The white must be clear and firm.

U. S. GRADE A - The shell must be clean, unbroken and normal. The air cell must not exceed $2/8$ inch in depth and may be regular or slightly wavy. The yolk outline may be fairly well defined. The yolk must be practically free from defects or blemishes visible before the candle. The white must be clear and reasonably firm.

U. S. GRADE B - The shell must be clean and unbroken, but may be slightly abnormal. The air cell must not exceed $3/8$ inch in depth and may show total movement not in excess of $3/8$ inch. If the air cell is small (not over $2/8$ inch in depth), it may be free. The yolk outline may be well defined. The yolk may show definite but not serious defects visible before the candle. The white must be clear but may be slightly weak.

U. S. GRADE C - The shell must be clean and unbroken but may be abnormal. The air cell may be over $3/8$ inch in depth and may be bubbly or free. The yolk may be plainly visible and appear dark. The yolk may show clearly visible germ development, but no blood due to such development. It may show other defects that do not render the egg inedible. The white may be weak and watery. Small meat spots or blood clots may be present.

(2) U. S. Standards for quality of individual eggs with dirty unbroken shells.

U. S. Standards for quality of individual eggs with soiled, stained, or dirty shells shall be as follows:

U. S. LIGHT DIRTY - Individual egg that has not more than one-eighth ($1/8$) of the shell surface slightly stained, slightly soiled, or slightly dirty but without loose adhering dirt and of the interior quality of U. S. Grade B or better shall be classed as U. S. Light Dirty.

U. S. DIRTY - Individual egg with more than one-eighth ($1/8$) of the shell surface stained, soiled, or dirty, or with less than one-eighth ($1/8$) of the shell surface stained, soiled, or dirty to such an extent that it is more than slightly stained, slightly soiled, or slightly dirty, or any egg with slightly stained, slightly soiled, or slightly dirty shell and of the interior quality of U. S. Grade C shall be classed as U. S. Dirty.

(3) U. S. Standards for quality of individual eggs with checked or cracked shells.

U. S. Standards for quality of individual eggs with checked or cracked shells shall be as follows;

U. S. CHECK - Individual egg with either clean or dirty shell that has an open crack or break in the shell but with the shell membrane unbroken and with no leakage of the shell contents shall be classed as U. S. Check.

U. S. LEAKER - Individual egg with either clean or dirty shell that has an open crack or break in the shell and shell membrane and with the contents exuding or free to exude through the shell shall be classed as U. S. Leaker.

EXPLANATION OF TERMS

The Official United States Standards for Quality of Individual Shell Eggs are applicable to eggs that are the product of the domestic chicken hen and are in the shell.

Terms Descriptive of Shell

1. Clean - A clean shell is one that is free from foreign matter and from stains or discolorations that are readily visible. Eggs with only very small specks or stains may be considered clean, if such eggs are not present in sufficient number in a package to detract appreciably from its appearance. Eggs that show traces of processing oil on the shell are considered clean when classified as "processed," or "shell treated," unless the shell is otherwise soiled.
2. Light Dirty - A light dirty shell is one that shows slightly stained or slightly soiled areas that are readily visible but without adhering dirt that could be readily detached and that do not affect more than $1/8$ of the shell surface.

3. Dirty - A dirty shell is one that has stained, soiled, or dirty spots of considerable size that may affect more than $1/8$ of the shell surface, or that has less than $1/8$ of the shell surface stained, soiled, or dirty to such an extent that it is more than slightly stained, slightly soiled, or slightly dirty.
4. Unbroken - An unbroken shell is one that is free from actual checks or breaks.
5. Checked or Cracked - A checked or cracked shell is one that has an actual break in the shell but where the shell membrane is unbroken and there is no exuding of contents from the egg.
6. Leaker - A leaker is an egg in which the shell and shell membrane are broken to the extent that the egg contents are exuding or are free to exude through the shell.
7. Normal - A normal shell is one that approximates the usual shape and that is of good even texture and strength and free from distinct ridges, rough areas, thin spots or other conditions not common to good shells. Slight ridges and rough areas that do not affect materially the shape, texture and strength of the shell are permitted.
8. Slightly abnormal - A slightly abnormal shell is one that may be somewhat unusual in shape or that may be somewhat faulty in texture or strength. It may also show distinct, but not pronounced, ridges, thin spots, or rough areas.
9. Abnormal - An abnormal shell is one that may be decidedly misshapen or that may be decidedly faulty in texture or strength or that may show pronounced ridges, rough spots, or other defects.
10. Depth of Air Cell - The depth of the air cell, when in its natural position, is the distance from the large end of the egg to the plane passing through the egg at the point where the lower air cell membrane touches the shell.
11. Regular - A regular air cell is one that retains a fixed position in the egg and that shows a practically even, smooth outline without any movement when the egg is twirled.
12. Slightly Wavy - A slightly wavy air cell is one that retains a practically fixed position in the egg but shows a slight movement, not to exceed $1/8$ inch, at any one point where its lower shell membrane touches the shell.
13. Movement not in Excess of $3/8$ inch - An air cell that shows a total movement not in excess of $3/8$ inch from the line where its lower shell membrane touches the shell.
14. Bubbly Air Cell - A bubbly air cell is one that has several rather small bubbles within or beneath it, that give it a bubbly appearance.
15. Free Air Cell - A free air cell is one that moves freely about in the egg. Such an air cell will seek the uppermost point in the egg, no matter in what position the egg may be held.

Terms Descriptive of the Yolk

16. Outline Slightly Defined - A yolk, the outline of which, when viewed before the candle, is indistinctly indicated and tends to blend into the surrounding white.
17. Outline Fairly Well Defined - A yolk, the outline of which, when viewed before the candle, is discernible but that has not become definite and distinct.
18. Outline Well Defined - A yolk, the outline of which, when viewed before the candle, is quite definite and distinct.
19. Plainly Visible - A plainly visible yolk is one that has a definitely discernible outline before the candle and that may appear dark.
20. Free from Defects or Blemishes Visible before the Candle - A yolk that, when viewed before the candle, shows no spots or areas on its surface indicating the presence of germ development or other defects or blemishes.
21. Practically Free from Defects and Blemishes Visible before the Candle - A yolk that, when viewed before the candle, may show very slight blemishes within the yolk shadow.
22. Definite but not Serious Defects Visible before the Candle - A yolk that may show definite spots or areas on its surface, when viewed before the candle, indicative of defects but with no definite indication of germ development or other pronounced or serious defects or blemishes.
23. Other Serious Defects - A yolk that shows well developed spots or areas of a character that constitute serious defects or blemishes but do not render the egg inedible.
24. Clearly Visible Germ Development - A development of the germ spot on the yolk of a fertile egg that has progressed to a point where it is plainly visible before the candle, as a rather definite, deeper colored circular area, or as a distinct spot on the yolk, with no blood in evidence.
25. Blood Due to Germ Development - Blood caused by development of the germ in a fertile egg to the point where it is visible before the candle. Such eggs are classified as inedible.
26. Blood Clots (Blood not Due to Germ Development) - Spots or clots of blood usually on the surface of the yolk but sometimes floating in the white. If they are small (not over 1/8 inch in diameter), the eggs may be classed as U. S. Grade C. If larger and/or showing a diffusion of blood in the white surrounding them, the eggs should be classified as inedible.

Terms Descriptive of the White

27. Clear - A clear white is one that is free from discoloration or from any foreign bodies floating in it. Prominent chalazae should not be confused with foreign bodies, such as meat spots or blood clots.
28. Firm - A firm white is one that is sufficiently thick or viscous to permit but limited movement of the yolk from the center of the egg when it is twirled. A firm white should have a consistency not lower than the white shown in No. 2 of

the Van Wagenen Chart of Broken-out Eggs.

29. Reasonably Firm - A reasonably firm white is one that has a reasonably good viscous condition but not as strong a condition as a firm white. A reasonably firm white permits the yolk to move somewhat more freely from its normal position in the center of the egg and thus to approach the shell more closely when the egg is twirled. A reasonably firm white may, therefore, cause the outline of the yolk to be fairly well defined. A reasonably firm white should have a consistency not lower than the white shown in No. 3 of the Van Wagenen Chart of Broken-out Eggs.
30. Slightly Weak - A slightly weak white is one that has lost its firm or even its reasonably firm condition, has become less viscous and is not as clearly differentiated from the thin white when the egg is broken out. It should have a consistency not lower than the white shown in No. 4 of the Van Wagenen Chart of Broken-out Eggs.
31. Weak and Watery - A weak and watery white is one that is thin and generally lacking in viscosity and that, therefore, permits the yolk to move freely from its normal position in the center of the egg and to approach the shell closely when the egg is twirled. It may have a consistency lower than the white shown in No. 4 of the Van Wagenen Chart of Broken-out Eggs.
32. Small Blood Clots or Small Meat Spots - Spots or clots of blood usually on the surface of the yolk but sometimes floating in the white. These blood clots may have lost their characteristic red color and appear as small spots of foreign material commonly referred to as meat spots. Such blood clots or meat spots are incorporated in the egg during its formation as, or after, the yolk leaves the ovary. Such blood spots are not due to germ development.
33. Bloody White - An egg, the white of which has blood diffused more or less generally through it. Such a condition may be present in new-laid eggs. Eggs with bloody whites are classed as inedible.

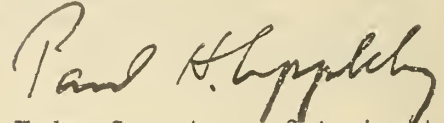
General Terms

34. No Grade - Eggs of possible edible quality that fail to meet the requirements of an Official or Tentative U. S. Grade or that have been contaminated by smoke, chemicals, or other foreign material that has seriously affected the character, appearance or flavor of the eggs are classed as "No Grade."
35. Loss - Eggs that are inedible, smashed, contaminated or containing bloody whites, large blood spots or large or unsightly meat spots, or other extraneous or foreign material are classed as "Loss."
36. Inedible Eggs - Under the Federal Food, Drug and Cosmetic Act, eggs that are filthy, putrid, or decomposed, or otherwise unfit for food in whole or in part are adulterated. Eggs of the following descriptions are classed as inedible; black rots, white rots, mixed rots (addled eggs), sour eggs, eggs with green whites, eggs with stuck yolks, moldy eggs, musty eggs, eggs showing blood rings,

eggs containing embryo chicks (at or beyond the blood ring state) and any other eggs that are filthy, decomposed or putrid.

Done at Washington, D. C. this
2nd. day of January, 1943.

Witness my hand and the seal of
the Department of Agriculture

A handwritten signature in cursive script, reading "Paul H. Huppel". The signature is written in dark ink and is positioned above the printed title.

Under Secretary of Agriculture

SUMMARY OF UNITED STATES STANDARDS FOR QUALITY OF INDIVIDUAL SHELL EGGS

(Figures in parentheses refer to paragraph number of Explanation of Terms on pages 2 to 6.)

Quality Factor	Specifications for Each Quality Factor						
	U.S. Grade AA	U.S. Grade A	U.S. Grade B	U.S. Grade C	U.S. Light Dirty	U.S. Dirty	U.S. Check
Shell	Clean(1) Unbroken (4), Normal (7).	Clean(1) Unbroken (4), Normal (7).	Clean(1), Unbroken (4); May be slightly abnormal (8).	Clean(1), Unbroken (4); May be abnormal (9).	Unbroken (4) May have light dirty condition (2).	Unbroken (4) May have dirty condition (3).	Clean(1) or dirty condition (2&3); Cracked but not leaking (5)
Air Cell	1/8 inch or less in depth (10); Regular (11) or Slightly Wavy (12).	2/8 inch or less in depth (10); Regular (11) or Slightly Wavy (12).	3/8 inch or less in depth (10); May show total movement not over 3/8 in. (13); If small (not over 2/8 in) may be free (15).	May be over 3/8 inch in depth (10) May be bubbly or free (14).	Same as U. S. Grade B	Same as U. S. Grade C	Same as U. S. Grade C
Yolk	Outline slightly defined (16); Free from defects or blemishes (20)	Outline fairly well defined (17) Practically free from defects or blemishes (21)	Outline well defined (18); May show definite but not serious defects (22).	May be plainly visible (19); May appear dark (19); May show clearly visible germ development (24) but no blood due to such development; May show defects that do not render it inedible (23).	Same as U. S. Grade B	Same as U. S. Grade C	Same as U. S. Grade C
White	Clear (27) Firm (28)	Clear (27) Reasonably Firm (29)	Clear (27); May be slightly weak (30)	Clear (27); May be weak and watery (21); Small meat spots or small blood clots may be present (32).			

